

Mineral Industry Surveys

For information, contact:

M. Michael Miller, Fluorspar Commodity Specialist
U.S. Geological Survey
983 National Center
Reston, VA 20192
Telephone: (703) 648-7716, Fax: (703) 648-7757
E-mail: mmiller1@usgs.gov

Barbara J. McNair (Data)
Telephone: (703) 648-7952
Fax: (703) 648-7975
E-mail: bmcnair@usgs.gov

Internet: <http://minerals.usgs.gov/minerals>

FLUORSPAR IN THE THIRD QUARTER 2006

Reported fluorspar consumption in the third quarter was 154,000 metric tons (t), an increase of 14% compared with that of the previous quarter and a 6% increase compared with the figure for the third quarter of 2005. Consumption of fluorspar for hydrofluoric acid (HF) and aluminum fluoride was 133,000 t, nearly an 18% increase compared with that of the previous quarter and about 5% higher than in the third quarter of 2005. Imports of fluorspar were 165,000 t, almost double the amount imported in the previous quarter and 8% more than in the third quarter of 2005.

Some of the values reported by the U.S. Census Bureau for acid-grade fluorspar imports were missing insurance and freight costs. For the specific shipments that were missing these costs, adjustments were made by incorporating estimated freight costs derived from industry sources or published prices from trade journals. These adjustments are included in the import values for specific countries and affect all quarters and totals in table 3.

Defense Stockpile

At the end of the third quarter 2006, the Defense National Stockpile Center (DNSC) reported that unsold stockpile material consisted of 8,945 short dry tons (SDT) (about 8,110 t) of metallurgical-grade fluorspar. Material committed for sale pending shipment totaled 20,358 SDT (about 18,500 t) of metallurgical grade.

Industry News

Hastie Mining Co. and Moodie Mineral Co. have been conducting a drilling program for fluorspar in Livingston County, KY, northeast of the former Klondike Fluorspar Mine. The partners are exploring a previously unmined vein deposit, and drilling completed through early October had identified about 1 million metric tons of high-grade ore with extremely low impurities. Hastie Mining, a supplier of acid-grade and metallurgical-grade fluorspar to assorted U.S. markets, has sourced the majority of its supply from National Defense Stockpile purchases since the mid-1990s. With the National Defense Stockpile material almost exhausted and import sources uncertain, the company decided to explore restarting fluorspar production from the Illinois-Kentucky Fluorspar Mining

District. Hastie hopes to begin mine production from the deposit by late 2007. Hastie also has been stockpiling fluorspar ore produced as a byproduct from its limestone quarry in Hardin County, IL, and owns the mineral rights to several former fluorspar properties in Illinois. Hastie is installing a heavy media separation plant and a briqueting plant at its quarry and purchased an idle flotation plant near Salem, KY. Ultimately, the company hopes to produce about 20,000 metric tons per year (t/yr) of acid-grade fluorspar and 30,000 t/yr of metallurgical-grade fluorspar from its mine and quarry operations (Watson, 2006).

South African fluorspar producer Sallies Ltd., which had experienced production problems at its Witkop Mine in 2005 and the first half of 2006, reported that operations had improved by the end of the third quarter and the company expected to produce about 10,000 t of acid-grade fluorspar in September. The Buffalo tailings operation, purchased earlier in 2006, was already close to its initial stated production level of 3,000 tons per month. The combined target for the two operations is 15,000 to 16,000 metric tons per month (Finance24.com, 2006§¹).

Since most production and administrative problems had been fixed or resolved (although a decision on Honeywell International Inc.'s appeal of its canceled supply contract is still pending), Sallies is considering additional expansion plans. These include the possible acquisition of two small but high-grade fluorspar deposits in South Africa and a large deposit in Australia, a bankable feasibility study in 2007 on restarting mining operations at Buffalo, and the possibility of exploiting the rare earths that occur in the Buffalo tailings (Seccombe, 2006§, Creamer, 2006§).

Reference Cited

Watson, Jimmy, 2006, Meeting market demand at North America's only fluorspar producer: Fluorspar 2006, Las Vegas, NV, October 22-24, 2006, Presentation, unpaginated.

¹References that include a section mark (§) are found in the Internet References Cited section.

Internet References Cited

Creamer, Martin, 2006 (November 23), Possible rare-earth bonus for fluorspar miner Sallies, accessed November 29, 2006, at URL <http://www.miningweekly.co.za/min/news/breaking/?show=98283#>.

Finance24.com, 2006 (November 24), Sallies moves into profit zone, accessed November, 27, 2006, at URL http://www.fin24.co.za/articles/display_article.aspx?Nav=ns&lv12=comp&ArticleID=1518-24_2035477.
Seccombe, Allan, 2006 (September 20), Fluorspar prices above \$200/t seen, accessed November 29, 2006, at URL <http://www.miningmx.com/mining-fin/194460.htm>.

TABLE 1
SALIENT FLUORSPAR STATISTICS¹

(Metric tons, unless otherwise specified)

	2005		2006			
	Third quarter	Fourth quarter	First quarter	Second quarter	Third quarter	Total
Imports for consumption:	153,000	120,000	181,000	83,800	165,000	430,000
Average value per ton, c.i.f. U.S. port, acid grade ²	\$208	\$210	\$221	\$214	\$211	\$216
Average value per ton, c.i.f. U.S. port, metallurgical	\$92	\$94	\$104	\$96	\$100	\$100
Exports	20,100	4,430	3,850	3,790	3,060	10,700
End of quarter stocks, consumer	109,000	80,800	109,000	78,200	103,000	XX
Fluorspar equivalent of imported hydrofluoric acid	48,400	53,100	60,900	56,500	56,100	173,000
Fluorspar equivalent of imported cryolite	809	707	1,640	1,100	1,100	3,870
Quarterly reported fluorspar consumption	145,000	119,000	143,000	135,000	154,000	432,000

XX Not applicable.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Average values per ton have been adjusted by the USGS using published prices and data from industry sources and may not agree with values calculated strictly from U.S. Census Bureau data.

TABLE 2
CONSUMPTION OF FLUORSPAR BY END USE AND ASSAY RANGE¹
(DOMESTIC AND FOREIGN IN THE UNITED STATES)

(Metric tons)

End use or product	First quarter 2005			Second quarter 2005		
	More than 97% calcium fluoride	Not more than 97% calcium fluoride	Total	More than 97% calcium fluoride	Not more than 97% calcium fluoride	Total
Hydrofluoric acid and aluminum fluoride	139,000	--	139,000	136,000	--	136,000
Metallurgical	6,710	8,700	15,400	4,240	10,100	14,300
Other uses or products ²	5,140	--	5,140	7,250	--	7,250
Total	151,000	8,700	160,000	147,000	10,100	157,000
Stocks, end of quarter ³	116,000	13,700	130,000	87,300	8,010	95,300

End use or product	Third quarter 2005			Fourth quarter 2005			2005 Year to date
	More than 97% calcium fluoride	Not more than 97% calcium fluoride	Total	More than 97% calcium fluoride	Not more than 97% calcium fluoride	Total	
Hydrofluoric acid and aluminum fluoride	127,000	--	127,000	106,000	--	106,000	508,000
Metallurgical	4,290	6,940	11,200	4,350	3,310	7,660	48,600
Other uses or products ²	7,200	--	7,200	5,310	--	5,310	24,900
Total	138,000	6,940	145,000	116,000	3,310	119,000	582,000
Stocks, end of quarter ³	98,000	10,800	109,000	69,600	11,200	80,800	80,800

End use or product	First quarter 2006			Second quarter 2006		
	More than 97% calcium fluoride	Not more than 97% calcium fluoride	Total	More than 97% calcium fluoride	Not more than 97% calcium fluoride	Total
Hydrofluoric acid and aluminum fluoride	123,000	--	123,000	113,000	--	113,000
Metallurgical	4,160	8,160	12,300	4,520	8,880	13,400
Other uses or products ²	8,080	--	8,080	8,520	--	8,520
Total	135,000	8,160	143,000	126,000	8,880	135,000
Stocks, end of quarter ³	93,700	15,600	109,000	53,900	24,300	78,200

End use or product	Third quarter 2006			2006 Year to date
	More than 97% calcium fluoride	Not more than 97% calcium fluoride	Total	
Hydrofluoric acid and aluminum fluoride	133,000	--	133,000	369,000
Metallurgical	4,520	8,250	12,800	38,500
Other uses or products ²	8,170	--	8,170	24,800
Total	146,000	8,250	154,000	432,000
Stocks, end of quarter ³	74,500	28,700	103,000	XX

-- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Includes acid grade used in enamel, glass and fiberglass, steel castings, and welding rod coatings.

³Stocks include distributor stocks (excluding National Defense Stockpile holdings) and consumer stocks for hydrofluoric acid and aluminum fluoride.

